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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,058	11/04/2003	Lothar E.S. Budike JR.	28086.001.00-US	3088

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WASHINGTON, DC 20006

EXAMINER
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RAO, SHEELA S

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/700,058

Applicant(s)

BUDIKE, LOTHAR E.S.

Examiner

Sheela Rao

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-26 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1-26 are pending and presented for examination.

***Drawings***

2. The drawings are objected to because they are too dark, specifically Figures 1-8. In addition, Figure 14B contains handwritten legends, which is unacceptable. The drawings will suffice for examination purposes, but formal drawings must be submitted at the time of allowance. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8, 15, 20, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 8 – limits the system of claim 1 by narrowing the features of “the ballast”. However, “the ballast” lacks proper antecedence in that claim 1 claims a ballast control module and a lighting ballast, which “ballast” Applicant is referring to in this claim is not clear.
- Claim 15 - depends from claim 13 and specifies the functionality of the “the microcontroller”, yet, claim 13 does not feature or claim a microcontroller.
- Claims 20 and 21 – both depend from claim 18 and limit the composition of “the microprocessor”. Nowhere in claim 18 is a “microprocessor” claimed; furthermore, “the microprocessor” lacks proper antecedence.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 11-15, 19-21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ribarich et al., US Patent No. 6,771,029 B2 in view of Satyanarayana et al., US Patent No. 5,909,429.

Ribarich et al. (hereinafter, “Ribarich”), teach of an electronic ballast circuit that is networked with other ballast circuits to provide large scale lighting control on a local or remote basis. In doing so, Ribarich teaches or suggests the claimed features of the instant invention. In Figure 1 of the Ribarich disclosure, a lamp ballast circuit (15) for controlling the lamp is shown. Within this control module resides a microprocessor (22) which functions as the data processing module of the lighting control system. Ribarich falls short in teaching the use of a wireless Internet control center as in the instant invention. For this aspect of the instant invention, the patented invention by Satyanarayana et al. (hereinafter, “Satyanarayana”) is relied upon. Wherein the method for installing a wireless network for controlling functions or systems of a building, e.g. lighting, is taught. The wireless network, as disclosed by

Satyanarayana, is an automatic or intelligent lighting control system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the wireless network control system configuration of Satyanarayana in the lighting control system of Ribarich because the use of a wireless network control center offers a low-cost communication infrastructure and is also capable of supporting additional systems installed within the building site. Thereby, permitting cost and upgrading efficiency as well as remote operability. Furthermore, wireless connectivity for control systems is a well-known direction of invention in the control system art; therefore, using wireless connectivity with the lighting control system of Ribarich would be an expected and obvious addition and not a patentably distinct supplement.

As per the use of repeaters of instant claim 2, the reference of prior art to Ribarich does not teach such usage. However, the patented invention by Satyanarayana teaches the use of repeaters at column 2, lines 49-52, where a plurality of repeaters are linked to the system for relaying packets of data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included repeaters as in Satyanarayana's patented invention to the lighting control system of Ribarich because the use of repeaters increases signal strength or amplification.

The use of local area networks (LAN) and wide area networks (WAN) as per instant claims 3 and 4, respectively, Ribarich teaches the use of local networks at column 2, lines 5-14 and wide area networks at column 2, lines 20-23.

With regard to the connectivity of the ballast control module to the lighting ballast via a low voltage interface (claim 5), a power line carrier (claim 6), and a digital addressable light interface or DALI (claim 7), Ribarich teaches these various modalities at column 2, lines 48-50 with regard to the low voltage interface, the use of power lines is taught at column 1, lines 27-29 and column 2, lines 46-47. the use of the DALI interface is disclosed at column 4, lines 16-19.

Ribarich teaches that ballasts have been used for many years as part of lighting systems, and in particular fluorescent lamps, as claimed by instant claim 8, see col. 1:ll. 17-19 and 32. The disclosure of the prior art continues to state the use of electronic ballasts as claimed instant claim 9, see col. 1: ll. 35. the integration of the ballast control module into the lighting ballast, as per instant claim 11, is depicted in

Figure 1 of the Ribarich patent. Furthermore, the lighting ballast supplying power to the ballast control module as per instant claim 12 is taught at column 1, lines 27-29. with regard to the monitoring and provision of alerts in reference to maintenance feedback and failures as per instant claim 13, Ribarich teaches the microprocessor providing commands for controlling the operation of the lamp, receiving fault detection and feedback signals to indicate the status of the lighting control circuit and lamp, see column 3: ll. 23-37.

The microcontroller being able to convert network protocol, control traffic flow, data storage, and logic as per claim 14 is taught by Ribarich at column 4, beginning at line 6. Ribarich teaches the microprocessor being addressable for bi-directional communication of status, commands, etc. Also, memory is provided for maintaining history profiles and status details. Although Ribarich discusses data transmission, the use of a RF radio cartridge decoder to transmit data at multiple frequencies as claimed in claim 14 is not suggested. However, the patented invention by Satyanarayana uses an RF transmitter/receiver for transmitting data at multiple frequencies, see col. 7: ll. 36-54. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used and RF transmitter as disclosed by Satyanarayana with the lighting control system of Ribarich so as to employ a technique for data transmission at different frequencies. The use of an RF transmitter minimizes the likelihood of an inadvertent transmission of data.

The processing of commands from the light ballast and data processing module by the microcontroller as claimed by instant claim 15 is taught by Ribarich at column 4, lines 6-13. wherein, the microprocessor is addressable for bidirectional communication of status, commands, etc.

The reference of prior art to Ribarich teaches the limitations of instant claim 19, which further limits the data processing module as including a communications cartridge for secure data communication. This claimed limitation is taught by the patented invention to at column 4, lines 3-13 where the communication of data is explained. Additionally, data communications in networks over communications channels is also taught by Satyanarayana at column 2, lines 40-43. The use of communications encoders is well known in the art for purposes of security during data communications over networks. Instant claim 19 continues by including limitations of the microcontroller converting WAN

transmissions to LAN transmissions along with the WAN TCP/IP gateway to connect the data processing module to the internet control center. This type of Internet activity and connectivity is a well-known direction of invention in the network communication art. Moreover, combining this Internet communications activity with the lighting control system of Ribarich would be an expected and obvious addition and not a patentably distinct addition.

With regard to the use of an operating system and RAM memory embedded into the microprocessor as per instant claims 20 and 21, figure 1 of the Ribarich reference shows a microprocessor and memory as being present in the patented lighting control system. The use of an operating system is explicitly inherent in microprocessor technology, as it is the operating system that undertakes the task of executing applications in the computing system. The existence of RAM memory is also explicitly inherent to such aforementioned systems as RAM memories are among the most common types of memories to be equipped into computing systems. Furthermore, the inclusion of an operating system and RAM memory into the lighting control system would be a desired and expected result, not a patentably distinct feature.

The use of particular processes for the operation of the lighting systems as per instant claim 24 is taught by Ribarich at column 3, lines 40-45 and 53-57, wherein the operation of a lamp or lighting system can be programmed for dimming or light level adjustments, among other operating parameters is disclosed.

7. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ribarich et al., US Patent No. 6,771,029 B2 in view of Satyanarayana et al., US Patent No. 5,909,429, as applied to claim 1-9, 11-15, 19-21, and 24 above, and further in view of Ranganath et al., US Patent No. 5,471,119.

The limitations of instant claims 1-9, 11-15, 19-21, and 24 as taught by Ribarich and Satyanarayana is stated above.

With regard to instant claims 17 and 18, where the use of a switching mechanism is claimed, Ribarich and Satyanarayana fail to teach or suggest the use of a switching mechanism as claimed. For this reason, the prior art by Ranganath et al. (hereinafter, "Ranganath") is relied upon. Ranganath

teaches that the voltage control circuit uses transistors or triacs to reduce the output voltage to the lamps. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the switching mechanism as taught by Ranganath with the lighting control system of Ribarich because of the reduction of output voltage which results in energy efficient lighting systems.

8. Claims 22, 23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ribarich et al., US Patent No. 6,771,029 B2 in view of Satyanarayana et al., US Patent No. 5,909,429, as applied to claim 1-9, 11-15, 19-21, and 24 above, and further in view of Krzyzanowski et al., US Patent No. 6,792,323 B2.

The limitations of instant claims 1-9, 11-15, 19-21, and 24 as taught by Ribarich and Satyanarayana is stated above.

Ribarich and Satyanarayana fail to teach management of the control center with the use of an operation center and database & applications servers. For this aspect of the instant invention, Krzyzanowski et al. (hereinafter, "Krzyzanowski") is relied upon. The limitations as set forth by instant claims 22, 23, 25, and 26 are taught through the management of controlled environments within the networks, wherein Internet access facilities are available to permit access to external networks. In doing so, Krzyzanowski discloses the inclusion of a control center that comprises servers or processing system and enables centralized command and control of the devices and/or applications. As for a network operation center, see element 100 in Figure 1 and col. 2: ll. 2-4, 18-23, 8-66, and col. 5: ll. 25, et seq. The database server for managing system information is taught as the control server as detailed in column 5, beginning at line 37, column 9, line 19, et seq., and column 11, beginning at line 12. The control server is also capable of controlling the operations and functions of the various system components, like the application server that contains a utility operation application. See col. 13: ll. 29-40 and col. 14: ll. 41, et seq.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the wireless control center of Satyanarayana along with the lighting control aspect of Ribarich, with the networking and distributing system of Krzyzanowski so as to achieve a control center



that distributes information to and among the devices and/or applications. The use of such a control center allow for the use of varied networks along with a centralized command and control means for data storage and management to gain efficiency, reduce costs, and increase productivity. Furthermore, the use of control centers, database/application servers within a computer controlled environment is well known in the control system art; therefore such elements would be an obvious addition and not a patentably distinct element.

9. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ribarich et al., US Patent No. 6,771,029 B2 in view of Satyanarayana et al., US Patent No. 5,909,429, as applied to claim1-9, 11-15, 19-21, and 24 above, and further in view of Kazanov et al., US Patent No. 6,836,080 B2.

The limitations of instant claims 1-9, 11-15, 19-21, and 24 as taught by Ribarich and Satyanarayana is stated above.

The use of electronic and/or magnetic, specifically, ballasts is not taught by the patented invention of Ribarich. Kazanov et al. (hereinafter, "Kazanov") discloses the features of instant claims 9 and 10, which call for the lighting ballast to be electronic or magnetic, respectively. The energy saving device as disclosed by Kazanov teaches the use of a fluorescent light fixture having a magnetic ballast and/or electronic ballast. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the capability of choosing magnetic ballast and/or electronic ballast with the lighting control system as taught by Ribarich because the availability of both types of ballasts would allow for a varied selection of fluorescent lamps.

10. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ribarich et al., US Patent No. 6,771,029 B2 in view of Satyanarayana et al., US Patent No. 5,909,429, as applied to claim1-9, 11-15, 19-21, and 24 above, and further in view of Szuba, US Patent No. 5,381,078..

The limitations of instant claims 1-9, 11-15, 19-21, and 24 as taught by Ribarich and Satyanarayana is stated above.

With regard to the potentiometer as featured in instant claim 14, wherein the makeup of the ballast control module including a potentiometer is claimed, the prior art reference of Ribarich and Satynarayana fail to teach or fairly suggest the use of a potentiometer for generating signals, voltages, and resistances for the operation of lighting ballasts. For this limitation, the patented invention to Szuba is relied upon. As stated in column 1, beginning at line 9, Szuba discloses an electronic potentiometer system for controlling ballasts of fluorescent lamps. The use of the potentiometer system provides control from many different positions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the potentiometer system of Szuba with the wireless control system as taught by Ribarich and Satyanarayana because the combination would allow for optimized operation of the entire and/or portions of the lighting system enabling greater control.

With regard to the limitations of instant claim 16 where the control aspects of the ballast control module along with a transformer for power supply is claimed, the prior art to Ribarich does not teach this. However, the patented invention by Szuba teaches the use of a dimming control unit for directly controlling the light intensity, see column 2, line 24-31. as for the switch control, see column 2, line 14-16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a dimming control unit as taught by Szuba with the lighting control system of Ribarich. The use of a dimming control unit for controlling the intensity of a light fixture or system is well known in the art and widely used. The capability of changing the intensity of lighting in an area provides efficient use of the power generated as well as creating the proper ambiance or atmosphere, as needed.

11. For the reasons stated above in paragraphs 6 through 10, the limitations of the claimed invention is taught by the prior arts of record; thereby, rendering the instant claims unpatentable.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6,608,453 B2 Morgan et al.

Teaches a method and apparatus for computer-based control of light sources.

USPN 6,507,158 B1 Wang

Teaches of an enhanced control of electronic ballasts in lighting control networks.

USPN 6,181,086 B1 Katyl et al.

Teaches an electronic ballast that incorporates a microprocessor based network controller.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. The fax number for the organization where this application or any proceeding papers is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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